$2.00

THE JACG NEWSLETTER

THE JERSEY ATARI COMPUTER GROUP

Volume 9 Number 12 BBS : 201-298-0161 FEBRUARY 1990

FROM THE EDITOR'S DESK

Well, you people have been GREAT! I asked and then I recieved. I think this issue is the largest since I took over the reins from Dave. I got articles and suggestions from members from out of town, on BBSes, at the meeting, and through the mail. I even have a couple articles I am holding for next month. Thanks again.

In this issue, we also have our first article on the Atari Lynx. I plan on giving the Lynx coverage in this newsletter unless anyone has any strong objections about it. Although they might not need a users group, I have the feeling that Lynx owners are going to be the major influx of new Atari owners in 1990. I can't decide if I think this is good or bad!

I mentioned this at the meeting, but here it is again for those unlucky ones who cannot attend. The one thing I would still like to see more of in our newsletter is some submissions from the younger set. You know, those capable folks under 20 years of age. It doesn't have to be a super big article or anything. Maybe an article on some of the local BBSes and what is happening on them.

Other than that, I am really happy with the way things are going with our newsletter as we head into the new decade. Let's ALL keep up the good work!

IN THIS ISSUE ...

CALENDAR OF EVENTS

NEXT MEETING

Saturday March 10,1990

Noise from the President

As I keep on asking Dave Arlington, "Where's the beef"? In other words, where's all of the NEW 8-bit releases jamming the shelves of the myriad of retail purveyors of ATARI 8-bit software? Well, that is really a rhetorical question. However, the 8-bit ATARI world is not dead. No, not by a long shot. As Samuel Clemens said, (Mark Twain, to most), after reading his obituary said; ' The reports of my demise are greatly exaggerated.' (Or words to that effect!) There may be little or no commercial work out there, but shareware, freeware and pure Public Domain ware abound.

This leads in to the 8-bit disk of the month which features NUGGET's (Norwich, U.K. User Group) "poor man's" 80 column word processor...as demoed by Dave Arlington at the January meeting (yep, if you didn't attend you were in a minority...by my count, more than half the membership attended). It also features "MEGATERM", an Australian terminal program that is shareware...yes, if YOU purchase the disk, YOU should send some $$$ to the land down under!). I will demo it at the February meeting...it features a large buffer and SIMPLE commands (like "S" for send, and "R" for receive, etc.) just my type of a program. There are a couple of other programs on the disk...one is a sector editor for double-sided disks...the other, I can't remember...why not be surprised!

I don't know what will be offered on the ST side...but I will be getting to John Dean, for a future Disk of the Month, "GEMINI DESKTOP" (no, not related to a former advertiser in the JACG NEWSLETTER) an alternative desktop from GERMANY (yes, the documentation is in GERMAN, except for some brief notes from A.I.M., who U/L'd it to COMPUSERVE), it is quite well done...although it seems to "eat" about 200K of RAM...I would suggest that 1040 and MEGA owners try it out. Speaking of COMPUSERVE, if you have never used its' sevices, or haven't been on it lately, I would suggest subscribing, or re-activating yourself. The library area is immense. Of course, there are many other services available...I just happen to like the files!

On another of my favorite subjects (it's soapbox time), it pays to participate. What could I possibly mean? Doesn't everyone participate, submit NEWSLETTER articles, and demo hardware and software for purely altruistic reasons? Of course, but have you noticed how many are "cashing in" at door prize time? And have you noticed the quality of the door prizes? Gave away a vintage 48K 800 last meeting, also software, books and magazines...come on readers, join if not a member, participate if not a participant; help the club and increase your chances at door prize time.

Got a letter from Larry Flynt (well, not really Larry, but LFP Publications); along with it was the charge receipt for my totally unused one year subscription to the now defunct ANALOG, and a form letter with many blocks on it, with NONE checked off...I therefore don't know what it means. Whether a credit was issued, whether I should get another of his sterling array of publications, or just what...I guess only time will tell.

Continued from Page 18

location that lets you use the extra 64K in a 130XE is also the same chip that lets you turn off the OS program for RAM and also the same chip that lets you turn off BASIC by holding down the Option key. In this last case, usuable RAM replaces BASIC, just as if you pulled the BASIC cartridge out of an Atari 800. The reason I bring up this memory location is that it does one more thing in the XEGS. (Well, I said I would mention it!) It also allows you three options for the last 8K of RAM. You can have BASIC, you can have usuable RAM, or it lets you switch in Missle Command!

Anyway, I see we've come to the end of our Magical Memory Tour. I hope you've gained some insight as to your Atari's inner workings. Please direct any questions or corrections you have to me in care of the newsletter.

WORD UP™ (for the Atari ST) by *NEOCEPT, Inc.*

Article by John King, JERSEY ATARI COMPUTER GROUP

WordUp is a good value. ...But is it for you? Maybe. The output is high-quality. It is also easy to learn, due to its drop-down menus and graphical interface, not to mention its help menu. And it can be controlled via keyboard commands. In fact, the only thing that would make you hesitate to buy WordUp is not a problem with the program — it is a problem with your printer: rather slow. That is to say, any program which uses your printer in graphics mode, which WordUp does, will take a long time to print. "How long," you ask. Well, in the *ballpark* of the length of time it takes to do a screen dump. (More or less, depending on how many lines are in your document. For you novices, using graphics mode means that the computer tells the printer, "Print this lovely *picture* of these characters." As opposed to saying, "Give me a **w**, give me an **o**, give me an **r**, ...")

QUALITY

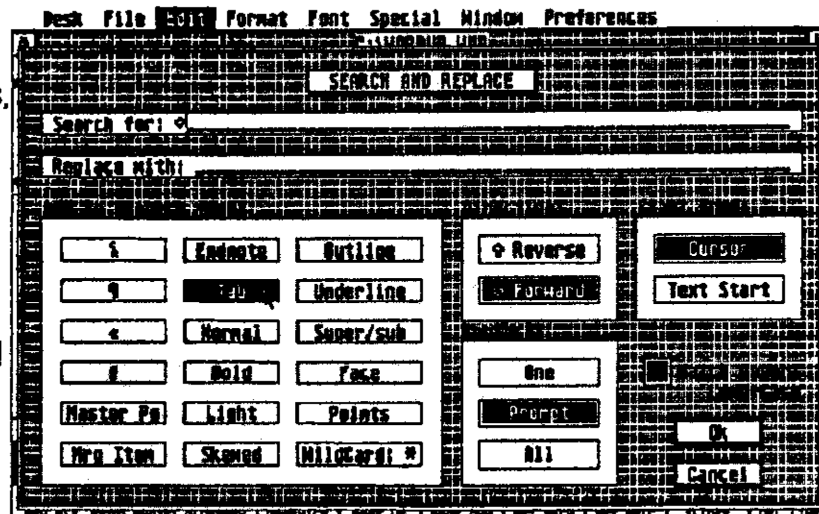
So why would you want WordUp? Because it looks beautiful! Here are a couple of personal examples: One time I took my turn bringing in some snacks to the office. I was playing around with WordUp and I made some little signs, then attached some clear plastic, to "laminate" them. One of our engineers asked me where I had had the printing done! He did not believe me until I held the signs up to his nose, so he could closely see the edges of the characters. Then, for Christmas, I used WordUp to print my envelopes in nice, big letters. (I also used the mail merge for this. -Nice.) Everyone liked it.

Now, don't think that this is the only word processor I use. When I want to print a long document in a hurry, or when I want to print many short documents in a hurry, and the LQ fonts on my printer are sufficient, I use ST Writer. But guess what? I had a very difficult time learning ST Writer. On the contrary, WordUp was a breeze to learn, in fact it was the first word processor I learned how to use. As a beginner, I used the drop-down menus exclusively, but after a while, it seemed to be a rather slow method. It's at that point that I began to pay attention to the symbols next to the words on the drop-down menus. These symbols represent the equivalent keyboard commands. You don't need to try to memorize your frequently-used commands; it comes easily. And even today, when I want to access a feature that I rarely use, I still go to the drop-down menus.

FEATURES

Here are what I consider the most important features: WordUp is a WYSIWYG (**W**hat **Y**ou **S**ee **I**s **W**hat **Y**ou **G**et) type of program. Thus, you can see what you are doing on the screen. It comes with a thoroughly written small three-ring binder, as you would expect from any

professionally produced program. As a matter of fact, this beautifully done manual, complete with a lot of screen dumps, was produced and typeset with WordUp and the Atari SLM804 Laser Printer! There are detailed instructions for even the absolute computer novice, who just bought his ST last week. The manual also has tutorials, a large reference section, and several appendices. It is more manual than you should need. As mentioned, you may access commands either through the keyboard or via the mouse & drop-down menus. You may have up to four windows open at once, with a different document in each. Of course, you may copy, or cut & paste from one document to another. Graphics may be imported, with your text wrapping around them. (DEGAS, Neochrome, GEM *.IMG and GEM Metafile are all supported). The search & replace is said to be sophisticated, as search & replaces go, due to the fact that you can select (via buttons on the screen) special characters. (See the screen dump on this page.) Although the mail merge is said to be different from other word processors, it is easy to use, allowing you to utilize data files created by a word processor or from most popular database programs. (Both fixed length field and standard deliminated formats are supported.) There is a glossary to store often-used phrases, or even formats such as your own letterhead, for example. WordUp can have "master pages", which commonly would be used for headers and footers, such as for page numbering. By using a master page to print a left-hand column and the subsequent page to print a right-hand column, you can have a two-column printout. WordUp does not use your printer's fonts, but, instead uses GDOS fonts, and comes with three of them. (I am using mostly 12-point Swiss here.) Other fonts are available through the online services or public domain sources. Blocks of text can be marked easily with the mouse or with the keyboard. Automatic backups are made when you save a document. WordUp even comes with a painless installation program. One item, however, that is missing, currently, is a spelling checker/thesaurus. I am hoping Neocept will consider it in a future version.



SUMMARY

If you want a word processor that is easy to use, produces high-quality output, and sells at a rather reasonable price, and if you don't mind your printer being a little slow, then you should look closely at WordUp. Currently, Wordup version 2.0 is available for a list price of $79.95, with the mailorder houses selling it in the ballpark of ≈ $50.00. For further information, contact Neocept, Inc. at 547-A Constitution Ave., Camarillo, CA 93010, (805) 482-4446, or look through the reviews listed below:

ST X-Press,	December, 1988	page 59
Atari Explorer,	Jan/Feb, 1989	page 30
ST Log,	March, 1989	page 84.

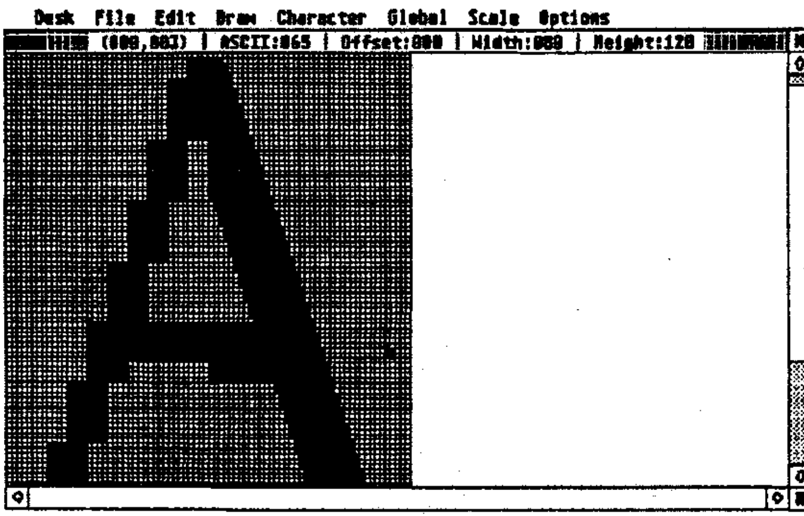
This article was printed with WordUp version 1.30 using a 24-pin Panasonic KX-P1124 dot-matrix printer.

FONTZ! (by *NEOCEPT*)

Article by John King, JACG

FONTZ is a font editor and a format converter. "So, who needs it," you ask. I like to think of it in the same way I think of a wrench: It does a good job when I might *need* it, but I don't exactly *want* to use it. The reason is that it takes a lot of time to clean up a font, character by character.

Let me explain what the program does. It allows you to convert fonts which were created for the Apple Macintosh and the Commodore Amiga into GEM (GDOS) fonts for the Atari ST. There are also some non-standard ST font formats which may be converted. These are from the HippoWord word processor, and from three paint programs, namely N-Vision, Paintworks, and the original version of DEGAS. FONTZ allows the scaling of your font, either to a different size or a different device. (A device being, for example, a 9-pin printer, or a high-resolution screen.) It lets you choose the pointsize or even the percentage of scaling you want, and automatically does the rest. Well, not **all** the rest. You see, when you change the size of a font, it will usually need some "cleaning-up". When enlarging a font, for example, you can expect the diagonal lines and curves to be quite jagged. You must take the time, either by using the drawing tools, such as a line, a box, a circle, or a pie slice, or else by clicking the mouse, dot by dot, to edit most of the characters. In the figure, I have taken the 12-point Swiss font included with Word Up, and had FONTZ enlarge it to 48 points. As you can see, the left side of the "A" is very jagged after being enlarged. After a few mouse clicks to turn some dots on, and others off, the right side of the letter looks good. As you might guess, it would take quite some time to go through the entire character set.



FONTZ, technically speaking, will not allow you to create a font from scratch. It will only allow you to modify a previously constructed font. Neocept has included, however, a "plain-vanilla" font to use just for the purpose of constructing a "new" font. From what I have read in the reviews, I think that Hyperfont, from Michtron (which I haven't tried, as yet), might be a better choice when starting from scratch, while FONTZ would be the choice when modifying someone else's font.

The FONTZ manual is a 93 page paper-bound book which has a **lot** of information. It is not for people who like to have their hands held, though! This book seems to be written as more of a reference book, and there are no step-by-step tutorials. You are expected to convert the several fonts included, for practice. (I didn't.) It seems that the "hands-on" approach of the authors really **does** work, though, as I really learned how to use the program when I tried to enlarge a Swiss font.

Although I am quite impressed with it, FONTZ may not be for Joe Average, who would probably rather purchase fonts than spend the time modifying them. FONTZ lists for $34.95, and is available via mail order for ≈ $23. If you want to read more, see the following magazines:

ST X-Press,	December, 1988	page 56
ST Log,	March, 1989	page 80
Atari Explorer,	Nov/Dec, 1989	page 39.

WORD-UP UPDATE
by John King, JACG

After finishing my article for the newsletter last month, I became aware of some late-breaking information regarding WordUp. In the February issue of STart magazine, on page 4, is an ad by Neocept, which mentions that WordUp 3.0 will be available in February. The March issue of STart will have "full details", but the 'ad' in the February issue (which is just a completely black, yes, B-L-A-C-K, page, with a list of features in the middle of it), says:

Spell Checker
Thesaurus
Multiple Columns
Full Page Preview
Auto-Hyphenation
Text-Mode*
Superior Print
More Fonts

*Fast formatted printing using your printer's built-in fonts at 10, 12, or 15 cpi. Still prints pictures while in text mode.

Buy WordUp 2.0 after 12/31/89 and get WordUp 3.0 for free! WordUp 3.0 has a MSRP of $99.95, which is $20.00 more than WordUp 2.0, so act quickly before WordUp 2.0 is sold out. ...

---and that was pretty much a direct quote. (OK, so I changed the order of the sentences at the bottom of the page, so what!)

This sounds really good to me. I can't wait until I get my upgrade notice in the mail. In my article, I complain that it takes a long time to print the pages, but with this new text mode, I see no reason why I wouldn't want to stick to WordUp all the time.....

WORKING ON MS-DOS FILES
WITH YOUR ATARI 8-BIT! Part 2
by Dave Dvorin, JACG

Welcome to the second part of a three part series on working with MS-DOS files on your Atari 8-bit.

The purpose of this series is to show you how it is possible to work with files from your favorite MS-DOS spreadsheet, database and/or word processor (this includes 1-2-3, dBase and WordPerfect) on your Atari 8-bit and conversely, how you can use files from your Atari 8-bit spreadsheet, database and/or word processor (this includes Synfile+, Syncalc and AtariWriter Plus) on your MS-DOS machine.

In Part One: Computer files... I explained what a computer file is, the various types, the two basic categories and the two types we are most concerned with in this series: ASCII and DIF files.

Today in Part Two, we will cover the hardware and software requirements in order to transfer files from one machine to another.

In Part Three, examples will be shown of data files transferring to and from:

o 1-2-3 and Syncalc
o dBase and Synfile+
o WordPerfect and AtariWriter Plus

Now onto...

Part Two: Hardware and Software Requirements for file transfer...

Although beyond the scope of this series as to why, let me just say that one cannot take a disk from an MS-DOS machine and expect to have an Atari computer system read any of the files. It simply will not work. Therefore, we must get the two computers to talk to one another.

There are two ways to accomplish this. One way is through the telephone lines. The other way utilizes a cable that attaches one computer to the other. Let's first discuss the hardware requirements in using the

telephone lines.

One the Atari end, one needs a modem. Any modem will do as long as there is a telecommunications program that will run it. (More on that later.) One also needs a way of connecting the modem to the Atari. With some Atari modems, (XM301, SX212, 1030) nothing additional is required since the modem connects directly to the Atari serial port. However, for most non-Atari modems, an interface box is needed. The purpose of the interface box is to provide what is known as an RS232 port. There were a number of these interfaces manufactured with the most popular of them being the PR: Connection from ICD, the makers of SpartaDOS. In addition to the interface, an RS232 modem cable is required for connecting the modem to the interface. This can be picked up from ICD as well.

On the MS-DOS end, one also needs a modem. It can either be an internal or external modem. It can be from any manufacturer. Its only requirement is that it must be capable of the same baud rate as the modem attached to the Atari. (The baud rate is the speed at which information is passed from computer to computer via RS232.) So, if you have an XM301 on the Atari, you must have a modem on the MS-DOS computer capable of transmitting at 300 baud.

For both computers, one will need telephone cables to go from the respective modems to the telephone jacks in the wall.

With the telephone hookup completed with what is required, let us now focus our attention on what is required for a direct connection between the Atari and the MS-DOS computers. On the Atari end, an interface box as described above is required. The purpose of the interface is to provide that RS232 port.

On the MS-DOS end, the computer must also have an RS232 port. It is also called a serial port. I cannot think of an MS-DOS machine that does not have at least one serial port.

With both machines exposing RS232 ports, a cable is required to connect the two. I personally have a PR: Connection on my Atari and a serial port on my IBM XT. Therefore below is a description of the necessary cable by pinouts that will work with a PR: Connection and an XT serial port. For those who are somewhat technically inclined, please note the functions along side the pin number. You can use that information to construct a cable that can be used with any combination.

The cable that connects the PR: Connection to an IBM XT's RS232 port is a male 9-pin to female 25-pin RS232 cable with the following pinouts:

Male 9-pin			Female 25-pin	
pin func.	pin no.		pin no.	pin func.
DTR	1	--------	8	DCD
DCD	2	-------	20	DTR
TD	3	--------	3	RD
RD	4	--------	2	TD
GND	5	--------	7	GND
DSR	6	--------	6	DSR
RTS	7	--------	5	CTS
CTS	8	--------	4	RTS

Now that a cable or a telephone line is connecting the two computers, software must run on both machines in order to have the necessary conversation. The software required is called a telecommunication program. Each program must provide a common way of transferring files. The most popular way is via a protocol called XMODEM. (I believe that a discussion of XMODEM and other protocols does not fit into the purpose of this series and therefore is not presented.) So make sure XMODEM is available on each program.

There are a host of telecommunication packages out there for the the Atari and the MS-DOS machines. For the Atari, the most popular are EXPRESS! by Keith Ledbetter, BobTerm by Robert Puff and

AMODEM. All are available through the JACG library. For the MS-DOS computer, favorites include Crosstalk, ProComm and Smarterm. There are many more.

We have come to the end of part two. I have described here two methods of establishing a connection between an Atari and an MS-DOS computer. It will be through this connection that we will be able to transfer the DIF and ASCII files to and from our MS-DOS and Atari computers.

Next time, I will take you through the necessary steps to go to and from:

- o 1-2-3 and Syncalc
- o dBase and Synfile+
- o WordPerfect and AtariWriter Plus

ST DISK LIBRARY
by John H. Dean, JACG ST V.P.

JANUARY 1990 DISK

"Bermuda Race II", *JACG_LIB.162,* is the Disk of the Month for January, 1990. This disk comes to us by way of Current Notes, their disk #360. This is my kind of game, and I think it is terrific! No scenarios about wicked alien invaders, no planets to save from destruction, no damsels or princes in distress - just sail a boat to Bermuda.

Well, not 'just' sail a boat. The objective is to sail from Newport, Rhode Island to Bermuda in the least amount of time. Don't know anything about ships or sailing? Not to worry! from the RUN menu, you may select "Sailing Instructions" (Introduction to Sailing), "Pointers" (Race Description and Pointers) or "Bermuda Race II" (the race itself).

Selecting "Pointers" will lead you to a description of the race,a summary of commands used in the race, sail management explanations, sailing performance guidelines or centerboard operation. There is also further information and instructions in the documentation.

As you sail your 80' "maxi" racing sailboat from Newport, RI to Bermuda, the normal sea-going obstacles may be encountered. You may be penalized for bad starts or persistently sailing in the wrong direction. You could lose time from experiencing lost (damaged) bilge pump(s) or being hit by following seas. You could lose satellite navigation and have to find your own way. You could be dismasted in a hurricane or run aground in the flats off Bermuda. The player reaching Bermuda in the least total time wins the race and may be listed in the player's Hall of Fame.

BERMUDA RACE II is **SHAREWARE**. If you use it and intend to continue using it, you are asked to send $5.00 to the author. Send your check to:

CARL CONNEL
4713 HERITAGE DRIVE
LYNCHBURG, VA. 24503

REPORT ON THE JANUARY JACG MEETING
by Joseph E. Hicswa, JACG

16 Bit Demos

Eric Jacovies descriptively took us on a "COMPUTER GUIDE OF THE SOLAR SYSTEM". This commercial, professionally produced, color graphics and text tutorial describes the structure of our Sun, the Moon and the planets. This one is an educational asset to every individual and institution. Out minds have infinite capacity. We never learn enough.

John King gave a detailed demo of WordUp (reviewed elsewhere in this issue), a word processing program for the ST. To emphasize some commands and functions, John used transparent plates provided by 16-bit VP, John Dean. VP dean will do the same for all who need a trancy to do their demo.

8 bit Demo

Dave Arlington demo'd his PD "NUGGET COLLECTION", which inlcuded a disk full of music programs, a display of 24 MicroPainter pictures, a disk full of Technicolor Dream pictures which use uses all 256 colors on screen at once, and PROC 80, a limited 80 column word processor for the 8-bit that does not require the XEP80 80-column card. Dave said he will add these public domain programs to our club library.

I am ever amazed with the quality of programs being written by ATARI users. It shows how creative we are in each our own way. Numerous "other machine" software writers do it for profit -- we do it for each other.

Members desiring additional information about any demo can get same from demonstrators at ensuing meetings. Anyone interested in a particular commercial program but hesitats purchasing it should ask our editor or an officer to canvass membership for someone who already has it and will do a demo at a meeting so will see before you buy.

Those who need directions to AT&T Bell Labs, may contact one of our officers whose names and addresses are printed on the back cover of this newsletter.

DoorPrizes for January

Prizes at our January meeting consisted of an Atari 800 computer, a Color Print program, several books and numerous magazines. (There's always something new to learn.)

Flea Market

ATARI is coming out with many new attractive items. A lot of members are upgrading their systems; they offer bargains in the Flea Market preceeding each meeting. JACG enhances our ATARI world at affordable prices. See you there in March! Bring a friend!

LETTERS TO THE EDITOR

Dear Dave,

I am writing in response to your survey that I read about in the newsletter, which Mike Hochman was kind enough to redirect to my new address. For obvious reasons, I can no longer attend the meetings, which, by the way, I thoroughly enjoyed. I'm a relative newcomer to Atari (a little over a year), and am an 8-bit participant (130XE, XF551, and Trak drives, 1027 printer). My uses are mostly in the word processor - spreadsheet - database manager area and, actually, I'm just amazed with what this cheap little thing can do.

Below, I've listed some thoughts on topics that are of interest to me. Whether or not they can be addressed in the newsletter is another matter.

- How are disks laid out? Are certain sectors dedicated to certain bits of information?

- In the 130XE (or others), what areas of RAM are dedicated, and to what?

- Can the 130XE RAM be expanded?

I guess I'm looking for some *basic* tutorials, with maybe a reference or tow where I can do some reading.

Also, I have an XM301 modem and DTERM, but not much of an idea as to the step-by-step procedure for starting and using them. The modem was used and did not come with a manual.

One last suggestion. Could the articles be identified as to whether they apply to 8-bit, 16-bit, or both?

I hope this letter is of some help to you. I intend to remain a member and will keep looking forward to the newsletter. Thanks a lot.

Sincerely, Paul Caldwell
6 Timberlyne Road

Chapel Hill, North Carolina

EDITOR'S REPLY:

I was very grateful to see some response from people who cannot attend the meetings. In addition to Paul's interesting letter which I will repsond to in a moment, Paul also sent in a program which will most likely be seen in these pages next month. I also recieved three articles with more promised on the way from a member currently attending school in Rhode Island. Now if only some of the stay-at-homes who still live in this state will take encouragement from this, we could see some real fat newsletters in months to come.

Anyway, I printed Paul's letter because it raises so many interesting questions and points that I thought a public discussion would be of use to ALL members.

The answers to your first two questions on how disks are laid out and how memory is used in the 130XE and other Atari 8-bits would make an excellent basis for two articles. I don't think I have ever seen a lot on the first subject and most articles on the second subject have not been written in what I consider to be down-to-earth terms. So to correct that, you will find an article about how the Atari 8-bit uses memory in most of it's incarnations later in this issue. And I would say for folks to look for an article on disk layouts in the next month or two.

Yes, the 130XE memory can be expanded. I have heard rumor of 1 meg 130XEs but I have only witnessed in real life, 130s going as high as 576K. I myself owned for quite awhile a 320K 130XE. There are some caveats to owning a 130XE expanded above 128K though. First off, as you will see in the article on how memory is used, anything over 64K as to be handled specially by your computer. What this means is there is often not a lot of software that will not recognize that you have all this extra memory. However, when you do find software that uses this extra memory, such as SpartaDos or PaperClip to name two examples, the benefits are well worthwhile. With my 320XE and PaperClip, I was able to hold the entire SpellPack dictionary and over 25 pages of text all in memory at the same time. It was as fast as any IBM spellchecker I have ever used.

Memory upgrades come in two flavors, the do-it-yourself kind or a pre-packaged kit. Even the pre-packaged kit usually requires you are or know someone that is trustworthy with a soldering iron and the guts of your computer. And depending on how much memory you want and where you purchase the chips, your upgrade could cost as much as your computer or more.

For just general reading and reference, the best book on the Atari 8-bit line still remains **Your ATARI Computer** by Lon Poole from Osborne/McGraw Hill. Most bookstores do not carry many Atari 8-bit books in stock any more, but this should be easily ordered through any B.Dalton or Waldenbooks. I consider this book to be the single most useful reference and learning book for the Atari 8-bit line even if it is a little outdated these days. In fact, most of the questions in your letter can be answered from that book.

As for using DTerm and the XM301, well, that sounds like a good topic for an article by someone other than myself. Most of the 8-bit modeming crew in the JACG seem to be divided amongst three factions. The DTerm faction of which the club president is a member, the BobTerm faction of which our 8-bit PD librarian is a member, and the Express! faction of which I happen to be a member. Not being a part of the DTerm faction, I will have to rely on one of their numbers coming forth to help you. If you ever get 1030 Express! for your XM301, I will be willing to give it a shot. Personally, I'd like to see an article in the newsletter

comparing all three terminal programs, strengths and weaknesses, written by someone familiar with all three. Any takers?

As for your last suggestion about identifying the type of articles, I like it! Look for it to start with the March issue.

Now, as for every other member of the group who would like their suggestions to be heard, see how easy it is!

ATARI FUMBLES THE BALL AGAIN
Commentary by Mark Santora, JACG

Well, Christmas is over. That means that all the computer dealers in the world are counting up thier profits from selling lots of hardware. All those except the Atari dealers. Why? Because sales on the mcuh loved, but never advertised Atari ST have slipped again.

My local store where I purchase my ST stuff had a bad Christmas. He sold two Mega 4s and a 1040ST. Of course he sold software, but his profit margain was way low. Even the help of the Portfolio didn't brighten his Christmas. He makes the same profit on the Portfolio as he does on a 520ST.

Well, to top off Atari's uneventful Christmas was the extremely limited release of the Atari Lynx. It was released only in the New York city and Los Angeles areas. My local Toys'R'Us recieved ten Lynxs. As did Child World and Babages. Kay Bee Toys recieved more systems for some reason. No matter, they sold out in seconds, even with the $179.95 price tag.

So when will the rest of the country get to have the Lynx? After talking to Atari Customer Relations I was told that the Lynx will not be in total national release until this summer. The edge the Lynx has, being color, might not matter becuase by then all the kids will have the Game Boy. They can get two Game Boys for the price of one Lynx.

So what else has Atari screwed up on? Well, the much discussed STACY will only be available for "Professional" use until the end of the summer. This means that the main stream of Atari's users, who desparately need a STACY, will not get one right away. My suggestion, ask for it for Christmas, 1990.

Also missing is the STE. Planned for a release in April, now it seems more likely, with the poor sales of the ST, that we might not see it until this summer. Also dispelled are the rumors of a monitor that would run all of the ST's resolutions in color, or B/W. There are no pans for a new monitor.

Last, but not least, the TT. Maybe for Christmas, I hear. I wouldn't count on it. The TT, a VGA IBM PC with mouse and Atari name, is a let down. Grpahically, it is Atari's answer to the Amiga 500, the STE is not. Unfortunately, the Amiga 3000 will probably hit the streets before the TT. After all, the number of systems you sell is the bottom line.

So once again, not even a month after Christmas, it looks as if this year of Atari, will be as boring as the last. Atari's announcement policy has gone out the window. Remember the one that said "We won't announce any product unless they are ready to ship in 90 days." I am not holding my breath for Atari any more. Don't get me wrong, I love the computers and have been using Ataris since the 800, but their lack of support and announcements of stuff that will probably never hit the streets has annoyed me. Too bad we, the users, will end up getting the short end of the stick because of too many people wearing neckties.

FROM THE 8-BIT VP's DESK
by Neil Van Oost Jr., JACG

Well, this note from your 8-bit VP

is coming from Oklahoma, where the Postal Service (from whom I earn my daily bread) has me domiciled for five weeks to learn a new computer system. While out here in the bread basket of America, I am still doing my thing. I have my 130XE, two disk drives and my faithful 1020 printer/plotter with me. I managed to bring most of it out in my Coleman cooler as I did last time. Although I had to pack my extra disk drive in my carry-on luggage. (Bell, whistles, sirens and --- What is that thing? From one airport security attendant.) Luckily one of the attendants piped up with "My son used to have one of those things before he ot his IBM."

Yes, it's a sign of the times as more and more 8-bitters switch to more powerful machines. I stopped at INFO 1 COMPUTERS in Oklahoma City this past weekend to see what was available for our favorite 8-bit computer --- There was not very much! About 50 programs graced a much smaller space than seven months ago when I had last been out here. In fact there was a large amount of ST software on sale and a lot of the 8-bit stuff was discounted 40 percent below the usual discount of INFO 1.

After looking through the selections offered, I found only one program that I was interested in, DropZone", and at a later date I will demo it. (Although it needs the reflexes of a ten year old, not those of a young 46 year old.) I spent about a half hour talking to one of the sales persons working at INFO 1. One of the things he related, was that a major distributor of 8-bit Atari software hadpacked it in. I kind of gathered that in the near future they would be out of the 8-bit software line. Also, reading between the lines, he didn't expect the ST line to remain viable outside of the music profession very much longer either.

I had a look at the latest version of "Flight Simulator", as played on an IBM clone with a VGA monitor, and I must say it was impressive. I have even given some thoughts myself over the past couple months to purchasing one of those things (IBM clone). The one thing that stops me so far, is that I still would want to keep my 8-bit machines. I have grown rather accustomed to those worn spots where I rest my hands on my 800. Also the 20 meg hard drive on my 130XE is a thing of beauty and I still have not explored its full potential.

One of the subjects being taught in the course I am attending out here is, MS-DOS version 3.1. While exploring the potential of this IBM DOS, I asked my instructor how I could copy one file from the A drive to the A drive in this DOS. His reply was, "Gee, I don't think it can be done". (EDITOR'S NOTE: Not to correct Neil's instructor since I don't know the exact situation in which the question was asked, but it is possible to copy a file from one disk to another using only one drive with MS-DOS.) Well, I just think I'll keep my Atari 8-bit just a while longer. After all it has done almost everything I have asked of it over the past eight years, and in my opinion it is still one of the best computers in it's class. And in some respects it will even outclass it's big 16-bit brothers.

Hopefully I will see all of you at the February meeting and that some of you will remember my request for 8-bit pictures.

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ATARI'S LYNX: A Review
by Mark Santora, JACG

I purchased my Lynx about a week before Christmas. The rumor that had beem floating around about the Lynx's higher price was true. The Lynx, originally to sell for about $149.95, now sells for $179.95. After talking to Atari, I found out that the increased price was due to the color LCD screen that was incorporated into the Lynx.

The box that encases the Lynx when you purchase it is big, much bigger than I expected it to be. My thoughts of portability were a little shaken. However, the box is designed with Atari's irrevererant flair for the dramatic. The "X" that is used in the word Lynx covers the box. Pictures of the Lynx and other accessories cover the box as well.

Once opening the box you see the Lynx being suspended by two large pieces of styrofoam. Next to that is the AC power adapter and the communication cable that allows you to hook the Lynx up to other Lynx systems. Previous word of mouth has stated that 16 units can be attached to one another, but the instruction booklet that accompanies the Lynx says that only eight may be linked together.

After unpackaging the system, you come across the California Games cartridge. It is not really a cartridge, but more of an oblong square credit card. Turning the card over, the user can notice the chip that contains the program. Also on the bottom of the cartridge is a line of raised circles and a raised Atari symbol. These are used to help the player remove the cartrdige.

Flipping the Lynx over, one finds the battery port. Opening it up and inserting the six AA batteries that the Lynx requires is a standard procedure. Note: One should purchase Energizers or Duracell batteries for the system. The Lynx goes through batteries extremely fast. A set usually lasts about three to four hours.

The cartridge port door is located on the left side of the system. It opens downward and allows cards to be slid in. The sliding of the cars is easy, however it does require patience to remove it. It also requires fingernails. You must grasp at the raised symbols to pull the card free. However, Atari says simply to "Press down firmly, then slide card out." Unfortunately, it is not this easy.

On top of the Lynx is everything you'd expect to find. The eight-way directional joypad is on the left side of the game machine. Four buttons are on the right side of the machine. Two are for use in the game, the other two are for the flip option for the left handed players. In between the four buttons is the external speaker which produces very good sound. In the middle of the Lynx unit is the 3.5 inch color screen. To the left of that are the on and off switches and on the right side are the two option buttons and the pause button. When pressing option one and the pause button together, the system resets itself, like a warm boot. When pressing the option two and the pause button, the screen flips for left handed players.

Above the screen, on the side panel, you find the volume control, the headphone jacks, the comlynx port, and the power port. When headphones are inserted the speaker is automatically disconnected. All ports are easily accessible and well placed. On the other side panel, beneath the screen, is the brightness control. This feature is very good becuase as your batteries start to go, you can increase the brightness to compensate for it.

Overall, the system from the users

point of view is exceptionally good. It fits comfortably in your two hands and provides excellent entertainment. My only problem is the removing of the cards, it is difficult. However, this is a minor quibble considering the overall quality of the product. To top off the system, they include California Games, an excellent card with lots of excellent gameplay. So, if you are considering purchasing a Lynx and are thrown off by the $179.95 price tag, what can I say except that you will be missing a great product. Now, if Atari can only ship them to the rest of the country besides the NYC and LA areas.

(Next month will have Mark's first Lynx game review.)

PHANTASIE
reviewed by Neil Van Oost Jr., JACG

I have entered the world of "Phantasie", and have been dwelling there for about a month now. I am traveling with some fellow adventurers and I would like to tell you about them. Hardhead (he got that name by breaking a giant's ribs with, you guessed it, his head) is a human. By profession he is a Ranger but he knows quite a few spells and also knows first aid. Ra Gigll is our priest and is handy tossing those spells around when the Black Knights try to hold us up for our gold. He is allright for a halfling, even if he is a vegetarian.

Shifty, a not so easy to look at goblin, is a weak sort of fellow who is always getting the worst end of the deal. If he wasn't such a good thief I think we'd hang him up by his pointy ears and part ways. We have a dwarf along, Fra Joe, who is our monk. He is short and squat and can lick his weight in green dragons, knows a little magic too.

We picked up Rabbit from the Fighter's Guild a couple of weeks ago. His nose always twitches like he has a permanent itch, hence his name. He is a human and swings a mean magical longsword. He hates giant ants and bees and will go out of his way to hunt them down. All we have left to tell about is myself. My name is Neil, I'm a fighter who likes a good adventure. If you like a good adventure then meet us at the Rusty Nail on the docks in the town of Pelnor, on the isle of Gelnor.

We will introduce you to the many strange creatures and sights about the island. You will meet dragons and giant ants and bees, fight kobolds, lizard men, minotaurs, orges and orcs, to name a few. There will be gold and glory enough for all. Yes, fight on the side of right. Come help us find and kill the evil wizard Nikademus. Help us find the magical lost rings. We already have three of the nine and soon will be ready to fight even the Gods.

Note: weaklings and wimps are not wanted unless they have extra special skills.

THE ATARI 8-BIT MAGICAL MEMORY TOUR
by Dave Arlington, JACG

This article is based on a letter we recieved from a reader this month. What I propose to do is give you the ten-cent tour of your Atari's memory. How it's laid out, how different parts are used, what you can use and what you can't use and all sorts of good stuff like that. We'll start with the Atari 400 and 800 and work our way up to the XEGS.

I realize that Antic and the late ANALOG magazines have both presented memory maps recently in several installments. These series explain memory locations one by one. Now this article is geared primarily to beginners interested in how their computer works rather than Assembly language programmers. So it will be different from these other series in that it gives just a general overview of how things work rather than detailed specifics. If you want detailed specifics, I refer you to either of

those two magazines or the book, **MAPPING THE ATARI** by Ian Chadwick, Compute! books. Therefore, you won't see any entries in this article like:

LOCATION: 31 -- Dual Frammistat Interrupt Vector. All terms will be clearly explained for beginners.

So let's start with a couple definitions. First off, the main brain of your computer, called the CPU, or Central Processing Unit, is a computer chip called the 6502. It is the same chip used in the Apple II series and the Commodore C-64 series. In all actuality the CPU, or the 6502, is not capable of too much on it's own. Other than some simple math, it's main job is like a traffic cop or mailman, moving data around from one memory location to another. Depending on what data it moves to what memory location, is responsible for what you see on your screen or what your computer does.

Even in it's job as a mailman or traffic cop, the 6502 is pretty limited. The way the 6502 is set up, it is like a mailman who only knows 65,536 (or 64K) addresses. Memory addresses, that is. It doesn't know how to deliver data to any memory location with an address higher than 65535. That is why Apples, Ataris, and Commodores were limited to 64K for a long time. We'll explain how 128K and more computers that use the 6502 came to be a little later.

Next terms to be defined are RAM and ROM. RAM stands for Random Access Memory. RAM is like a cassette tape in that you can either store data there or read data from it. ROM stands for Read Only Memory. ROM is like a Compact Disk in that usually you may only read data from it, you may not store any data there.

The last term we want to define before we actually start looking at your Atari's memory is the Operating System. If you recall from the paragraph above, the Apple, Atari, and C-64 all use the same 6502 chip as it's brain. Furthermore, the same 6502 chip in all three machines is still only capable of doing the same simple things. So what makes an Apple different from an Atari? Well, the inventors of your computer wrote a special computer program called the Operating System. It tells the computer what to do when the 6502 stores certain data at certain memory locations, basically it tells the computer how to operate. Without this special program, your computer would be just a large paperweight. The Atari's Operating System program is different from the Commodore's or the Apple's, which is why these machines act so different.

Since this Operating System program (hereafter called the OS) tells your computer how to operate, you can pretty well imagine it is the single most important program your computer has. It must always be there. To make sure it is always there and that you don't ever mess it up, the OS program is put on ROM memory that you may not store data on. That is why people always tell you that nothing you type into your computer can permanently harm it. You are protected from accidently screwing up the OS program because it is in ROM.

OK, I think we know enough to start looking at the memory layout of the Atari 8-bit line. We'll start with the grandpappys, the Atari 400 and 800. When the 48K Atari 800 was being compared to the 64K Commodore 64 in the early 80s, it was an unfair comparison as we shall see. If you ever pop the top open on an Atari 800, you will see 4 slots, each slot able to hold memory cards.

The first memory card that had to be in there is the 10K OS ROM memory card. This card held the 10K OS program. The OS program occupies the last 10K of the 6502's known 65,000+ memory addresses or approximately addresses 55,500 to 65,500 or so. After the OS program card is plugged in, that leaves 54K (or about 54,000) of memory addresses that the 6502 can still get

to. Unfortunately, on the Atari 800, that left three slots for memory cards and the largest memory card that Atari produced in those days was a 16K RAM memory card. Plug in three of those and you have 48K of RAM at most. The Atari 400 only had two slots, one which was used by the OS program card. The other could hold only one 16K or 8K RAM memory card. That is why most early Atari 400s only had 16K memory at most.

See why the 48K label for the Atari 800 is unfair? It really means 48K **RAM**! Later manufacturers got larger numbers, like the Commodore 64, by including the OS ROM in their totals. They just said 64K memory, they didn't mention that 10K or so of it was Read Only Memory that could not be used by your programs.

Now, let's see... The 6502 can get to 64K of addresses, the OS program uses 10K, the three memory slots that can hold 16K cards uses up to 48K, that means about 6K of memory addresses are left over in the Atari 800. Are they used for anything? Well, out of that 6K on an Atari 800, 4K of it really is wasted area that your computer cannot use. Sure, the 6502 could deliver data to that 4K, but since there is no RAM or ROM there, nothing would happen. That leaves 2K of unexplained space.

Your Atari 8-bit is much superior to other 8-bit machines in that it has several computer chips in it that help out the 6502. There are chips that have those great names like ANTIC, POKEY, GTIA, and others. These chips are much like the 6502 in that they are not part of your computer's memory, but separate chips with their own jobs to do. ANTIC, for example, is the chip that talks to your TV or monitor and tells it what and how to display things on the screen. It has it's own programming language and operates pretty much independently of the 6502 and it's memory.

But even though ANTIC operates mostly on it's own, every now and then the 6502 needs to talk to it and maybe transfer data back and forth to and from it. For instance, when you want to change Graphics Modes or switch character sets. Since the 6502 only knows how to deliver and retrieve information from those 65,000 addresses it knows, it doesn't really have a way to talk directly to ANTIC, or any of the other support chips. So what Atari did was set up a special 2K memory area right underneath the 10K OS program. Whenever the 6502 stores or retrieves data in this 2K area, what it is really doing is talking to these support chips.

So now we've accounted for all 64K of the addresses the 6502 can get to, at least for the Atari 400/800 line. The lowest 48K is RAM available to read and write to, the next 4K is no man's land for the 400/800s, the next 2K is the special area used to talk to the support chips, and the top 10K is the OS program in ROM which can only be read. OK, ready for the next step? We are now going to look at how all that wonderful 48K of RAM is divvied up.

As soon as you turn on your computer, the special OS program starts running. As it does, it appropriates most of the lowest 2K or RAM. Oh, it does toss the user a few bones like the famous page 6 (locations 1536 to 1792), but most of that 2K area is property of the OS program. If you are using a disk drive, then DOS gets loaded into RAM right above the 2K used by the OS program. There are many, many different DOSes out there and they all use a different amount of your RAM, but a safe guesstimate for most Atari Dos 2.0 type DOSes is 8-10K of RAM. Do you have a language cartridge plugged in like BASIC or Action!? If so, the top 8K or RAM, just under that unused 4K area is gobbled up by the language cartridge.

Now, back to the ANTIC chip for a second. Remember I said it had it's own programming language and it's own job to do? Well, what it doesn't have is it's own memory. ANTIC uses the 6502's memory for what it needs. Everything you see on your screen is fed there by

ANTIC from a place in RAM called screen memory. It uses up different amounts of RAM memory depending on what Graphics mode you are currently using from about 1/4K for Graphics Modes 2 and 3 to about 8K for Graphics Modes 8, 9, 10, and 11. OK, so let's add this up. 2K for the OS program to use, 8-10K for DOS, 8K for the language cartridge, and maybe up to 8K for screen memory. So, if your BASIC program calls a Graphics 8 screen, you've only about 20-22K of your starting 48K RAM to fool around with. For most users booting up a 48K Atari 800 with Basic and DOS and in it's starting Graphics Mode 0 set-up will find about 29K of memory to work with.

So then out came the 1200XL and the 800XL with their advertised 64K of RAM. If you've been following along so far, you might notice a discrepancy. Didn't I say the 10K OS program always had to be there and that it was in ROM to protect it from you? Actually, the 1200 and 800XLs increased the size of the OS program to about 12K! Well, Atari was not lying, sort of. Yes, you can get 64K RAM out of a 1200 or 800XL, you just have to turn off the Operating System program. You see, Atari added a memory location to let you turn off the OS ROM program and switch in some RAM memory they put in there in it's place.

As Peter Venkman would say, "Igon, I'm fuzzy about this whole good-bad thing." Didn't you say earlier that the computer would not know how to do anything without the OS program running the show? Yes, that's still true. So, initially, it looks like a Catch-22 situation. With the OS program going, you only have about 52K or RAM, turn it off and you have a 64K RAM machine that doesn't know how to do a single thing!

The solution (used by the Translator Disk and many other programs) is to copy the OS program into RAM, turn off the OS program in ROM and replace it with RAM memory, and then quickly copy the OS program from RAM into the new RAM space exactly where the ROM used to be. So that's how the 1200 and 800XLs can be called 64K RAM computers. The caveat is that now that the OS program is in RAM instead of ROM, it can very easily be sent into never-never land if you write anything screwy into that new RAM area. Again, not to worry, the OS ROM is still lurking there waiting if you goof things up. Just turn the computer off and back on again.

One last note before moving on to the 130XE. Perhaps you've noticed there are certain programs that only run on the XL or XE series of machines. There is usually one or two reasons for this, aside from poor programming practices. First off, that 4K area that was unusable by the 400/800s has RAM in it in the XLs and XEs. The extra 2K of the new Operating System uses some of this 4K area, but the rest is used by eager programmers. You saw from the example above how fast RAM can get gobbled up by various things, new programs that need more RAM started using that extra area that the 400/800s could not get to. Expert programmers who turn off the OS ROM and change it into OS RAM, use parts of the OS program itself, again something the 400/800s just can't do.

Now that you're hopelessly confused, we'll talk about the 130XE and its 128K of memory. The 130XE has an extra 64K of RAM that is divided up into four banks of 16K each. All along I've been hammering at the fact that the 6502 can only get to 64K of addresses. The 130XE gets around this in two ways. There is a memory location in the 130XE that lets you access the extra 64K of memory that the 130XE has. The first way it uses this memory location is to fool the 6502 into using one of the four 16K banks of memory whenever it accesses memory locations in the second 16K of regular RAM. (The first 16K of regular RAM being used by the OS and DOS.) The second way the extra memory is used is by telling the ANTIC chip to look at the extra 64K area for screen memory rather than the regular RAM area.

By the way, the same memory

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